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ABSTRACT

This study, conducted with 279 5th graders, examined the effects of high norms (HN) and low norms (LN) used as goals in a 2-week vocabulary learning task. Ss in the LN condition yielded significantly higher retention scores; performance and interest scores were not significantly different. These results were compared with those of a related experiment in an attempt to identify factors of goal-effectiveness. Hypotheses concerning the functions of goal remoteness, goal-ability discrepance, and goal specificity on academic performance are proposed. (Author)

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High and Low Norms as Goals for Achievement

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Norms can serve both as guides for specifying expectations and as standards for improving performance (Thorndike, 1971). The effect of grade norms as class standards, however, is questionable. They are typically established by an impersonal group which implies an element of goal-remoteness. Furthermore, within any one classroom a given norm is likely to be inappropriately high or low for the majority of individuals and possibly inappropriately easy or difficult for the class as a whole. Goal remoteness and level appropriateness are, therefore, two variables in light of which norms as class standards should be examined.

Social psychologists suggest that standards established by a group for which an individual feels little affinity may not be perceived as applicable or relevant to him and thus may have little or no effect on his behavior (McDavid, 1966; Festinger, Schacter, and Back, 1950; Kelley, 1955; Sherif and Sherif, 1964).

In the comparison of difficult versus easy goals, there is much evidence that the former elicit higher performance that the latter (Dey and Kaur, 1965; Locke, 1966a, 1966b; Fryer, 1964; Siegal and Fouraker, 1960) suggesting that a high class standard is more effective than a low class standard. Literature on the Level of Aspiration, however, suggests the contrary. This theory predicts that Ss tend to lower their aspirations when given high standards they cannot attain, and raise their aspirations when given standards they attain or surpass (Escalona, 1940; Lewin, Dembo, Festinger, and Sears, 1944).

This experiment was designed to further examine the differential effects

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of using High Norms (HN) and Low Norms (LN) as standards for 5th graders. The norms were said to have been established by similar 5th grade classes. A ten-day vocabulary task was conducted in the experimental classrooms and dependent measures of performance, retention, and interest were examined.

Method

Subjects

Eight classes of 5th graders participated in this study and were randomly assigned to one of the two conditions. There were 137 Ss in the HN condition and 142 in the LN condition. The mean group IQ's were 100 and 103 respectively.

Materials

The materials used for this study were as follows:

Study Sheets--A 10-page booklet in which each page contained a list of 20 vocabulary words suggested for home study.

Quiz Sheet--Ten parallel, multiple-choice vocabulary tests each containing ten items. The key words for a given Quiz Sheet included half of the items from the study list distributed on the preceding day. (The development of these parallel quizzes is described by Clifford, 1971). The estimated KR-20 for the composite score on the 100 items was .96 for a sample of 400 5th and 6th graders.

Opinion Sheet--A three-item instrument used to measure task interest. The instrument was administered following the completion of the final quiz.

Retention Test--A fifty-item instrument based on five randomly selected items from each of the ten quizzes. The estimated KR-20 based on 400 5th and 6th graders from similar school systems was .95.

Teacher's Manual--Sets of directions for the HN and LN conditions explaining how the task was to be conducted, scored, and recorded.

Norm Charts--An 8 1/2" x 11" paper on which was graphed mean classroom scores

for the ten daily quizzes. The charts used in the HN condition showed mean scores of 7, 8, and 9 while the charts used in the LN condition showed means of 2, 3, and 4. (Based on previous use of the vocabulary quizzes, 5th graders were expected to have class means of about 5.2 to 6.2).

Procedure

Classroom teachers administered all instruments. The basic procedure for the task was as follows: on each of ten consecutive days Ss in both treatments studied a 20-word Study List. The day after a list was assigned, Ss were given a multiple-choice quiz covering half of the words. Teachers scored the quizzes and gave feedback to the Ss before they began studying their next list. In addition, the class mean was computed and recorded on the norm chart. Thus, a visual comparison of the high or low norm, used as a treatment variable, and the actual class performance was provided daily.

After the final Word Building quiz, Ss completed the Opinion Sheet. Two weeks after the vocabulary task had been completed Ss were given a retention test for which there was no forewarning. Thus, a blocked design with two treatments (i.e., HN and LN) and three dependent measures (i.e., performance, interest, and retention) was used for this experiment.

Results

The results of the multivariate and univariate analysis for the three dependent measures are presented in Table 1. The multivariate test indicated there was a significant difference between the two treatments ($p < .04$). Although there was no significant difference for retention ($p < .05$), Ss retained more in the LN than in the HN condition (see Table 2). The difference on interest approached significance ($p < .07$); but the trend did not complement the difference found on the retention measure. Subjects given high norms expressed greater interest than Ss given low norms (see Table 2).

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Insert Table 1 and Table 2 here
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Comparisons with a Related Study

This study was conducted simultaneous with another experiment which examined the effects of within-class competition among students grouped homogeneously on ability. Six to nine students of comparable ability comprised a group, Each class had four such independent groups. The competition study (Clifford, 1972) consisted of a control (C) and two competitive treatments, CT_1 and CT_2, varying slightly in nature of reinforcement. The task and dependent measures (i.e., performance, retention, and interest) were common to both studies; samples for the two experiments were randomly drawn from a single population. There was, however, a major methodological difference between the two investigations. For the competition experiment, a classroom mean was used as the unit of observation (20 classes per cell) while in the norm study the individual student was used as the experimental unit. The within-class grouping in the competition experiment intensified the interdependency of students within a class and it was considered essential to use class means as the unit of observation.

Although no statistical comparisons can be made between these studies because of the difference in unit of observation, descriptive statistics will be used to contrast the treatments and to speculate on the social-relevance factor implied in goals set by peers (i.e., classroom competition) versus goals set by unknown students (i.e., norms).

Figure 1 shows the mean daily performance for the two groups as well as the C, CT_1, and CT_2 treatments. With noticeable consistency, performance is lower in the HN than in the LN condition, and lower in both these treatments than in the control and competitive conditions.

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Insert Figure 1 here
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In Figure 2, a comparison is made between the proportion of correct responses on the performance and retention measures in each of the five conditions. In all cases retention was superior to original performance; the difference is most noticeable in the LN condition.

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Insert Figure 2 here
- - - - - - - - - - - -

Figure 3 presents the results on the interest measure. Imposing norms as goals or standards does not tend to arouse as much interest as identifying specific peer competitors. Low norms yield little more interest than does the absence of any specified goal as represented in the C condition.

- - - - - - - - - - - -
Insert Figure 3 here
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Discussion

If norms are to be used as standards it appears to be more effective to use them with classes that can surpass the given norm rather than classes which are noticeably below it. The significant difference in retention and the non-significant but matching trend in performance offer support for the level of aspiration theory.

A comparison of the results of this experiment with the competition study, however, suggests that norms may have relatively little value as class standards, particularly if the given norm is considerably higher or lower than the mean performance of the group on which it is imposed. The remoteness of individuals establishing the norm or goal (i.e., goal remoteness) and appropriateness of level of difficulty seem to be two variables which influence the effectiveness of a goal for students. Classmates in face-to-face competition are likely to be more certain about their probability of success or failure than Ss contending with a goal set by unknown individuals. Classmates grouped homogeneously will tend to perceive their competition or goal not only as proximate and valid but

also as appropriately challenging. On the other hand, most of the Ss who competed against the high or low norms were undoubtedly quick to perceive a fairly large discrepancy between the imposed goal and their individual performance ability. In the absence of a specified goal (control condition) we must assume that previous self-performance becomes the S's goal. He, therefore, has an appropriate and proximate goal, but because there is no overt comparison of performance with a standard there is likely to be only a vague consciousness of a goal. This suggests that specificity of goal may be a third important variable in goal effectiveness, but perhaps only if goal proximity and appropriateness is insured.

Thus, the results of this HN versus LN experiment and a comparison of them with the competition study suggest the following hypotheses:

1. Goal effectiveness (i.e., increased performance and retention) is a negative and linear function of goal remoteness.
2. Goal effectiveness is generally a negative and linear function of a goal-ability discrepancy.
3. A goal-ability discrepancy favoring ability (i.e., low goal) is more effective than one favoring the goal (i.e., high goal).
4. Assuming an appropriately difficult and proximate goal, goal effectiveness is a positive and linear function of specificity of goal.

The word "generally" is used to modify the third hypothesis because it is speculated that maximum goal effectiveness may be obtained with a goal which is either at or slightly below the performance level of the S. The Level of Aspiration theory suggests that either situation is likely to result in an increased, and furthermore, self-established or internalized goal which is assumed to be relatively more motivating than an imposed standard.

The relatively high interest rating in the HN condition is not easily explained, particularly in view of the performance and retention trends. It

is plausible, however, that low goals which yield high expectations result in greater consciousness of, and dissatisfaction with errors than do high goals. Error consciousness may have accounted for increased learning from errors (reflected in significantly higher retention scores in LN), while error dissatisfaction might explain the relatively low interest scores in the LN condition.

REFERENCES

Clifford, M.M. Effects of competition as a motivational technique in the classroom. American Educational Research Journal, 1972, in press.

Clifford, M.M. Goals and motivational effects in the elementary school, Part I, HEW Grant No. OEG-6-70-0043.

Dey, M.K. and Kaur, G. Facilitation of performance by experimentally induced ego motivation. Journal of General Psychology, 1965, 73. 237-247.

Escalona, S.K. The effect of success and failure upon the level of aspiration and behavior in manic-depressive psychoses. University of Iowa Studies in Child Welfare, 1940, 16, 199-302.

Festinger, L., Schacter, S. and Back, K. Social pressures in informal groups. New York: Harper, 1950.

Fryer, F.W. An evaluation of level of aspiration as a training procedure. Englewood Cliffs, N.J.: Prentice Hall, 1964.

Kelley, H. Salience of membership and resistance to change of group anchored attitudes. Human Relations, 1955, 8, 275-289.

Lewin, K., Dembo, T., Festinger, L., and Sears, P.S. Level of aspiration. In J. Mc V. Hunt, ed. Personality and the behavior disorders. New York: Ronald, 1944.

Locke, E.A. A closer look at level of aspiration as a training procedure: A reanalysis of Fryer's data. Journal of Applied Psychology, 1966, 50, 417-422(a).

Locke, E.A. The relationship of intentions to level of performance. Journal of Applied Psychology, 1966, 50, 60-66(b).

McDavid, J.W. Conforming behavior as a function of respect and attraction for the source of influence. Office of Naval Research Contract 4008 (08), University of Miami, Coral Gables, Florida, Final Report (Abstract), 1966.

Sherif, M. and Sherif, C. Reference groups. New York: Harper and Row, 1964.

Siegal, S. and Fouraker, L.E. Bargaining and group decision making. New York: McGraw-Hill, 1960, 61-69.

Thorndike, R.L. Educational measurement. (2nd ed.) Washington, D.C., American Council on Education, 1971.

TABLE 1

Analysis of Variance

Multivariate analysis using
Wilks Lambda Criterion

HN *vs* LN $F(3,235) = 2.72$ $p < .04$

Univariate Analyses	$F(1,237)$	MS	p
Performance	1.24	45435.48	<.27
Retention	3.83	541.98	<.05
Interest	3.23	7.70	<.07

TABLE 2

Means and Standard Deviations

Dependent Variable	High Norms	Low Norms
Performance (P)	51.27	55.16
	19.95	18.55
Interest (I)	7.60	7.26
	1.55	1.53
Retention (R)	27.91	31.01
	11.85	12.00
Mean over standard deviation		

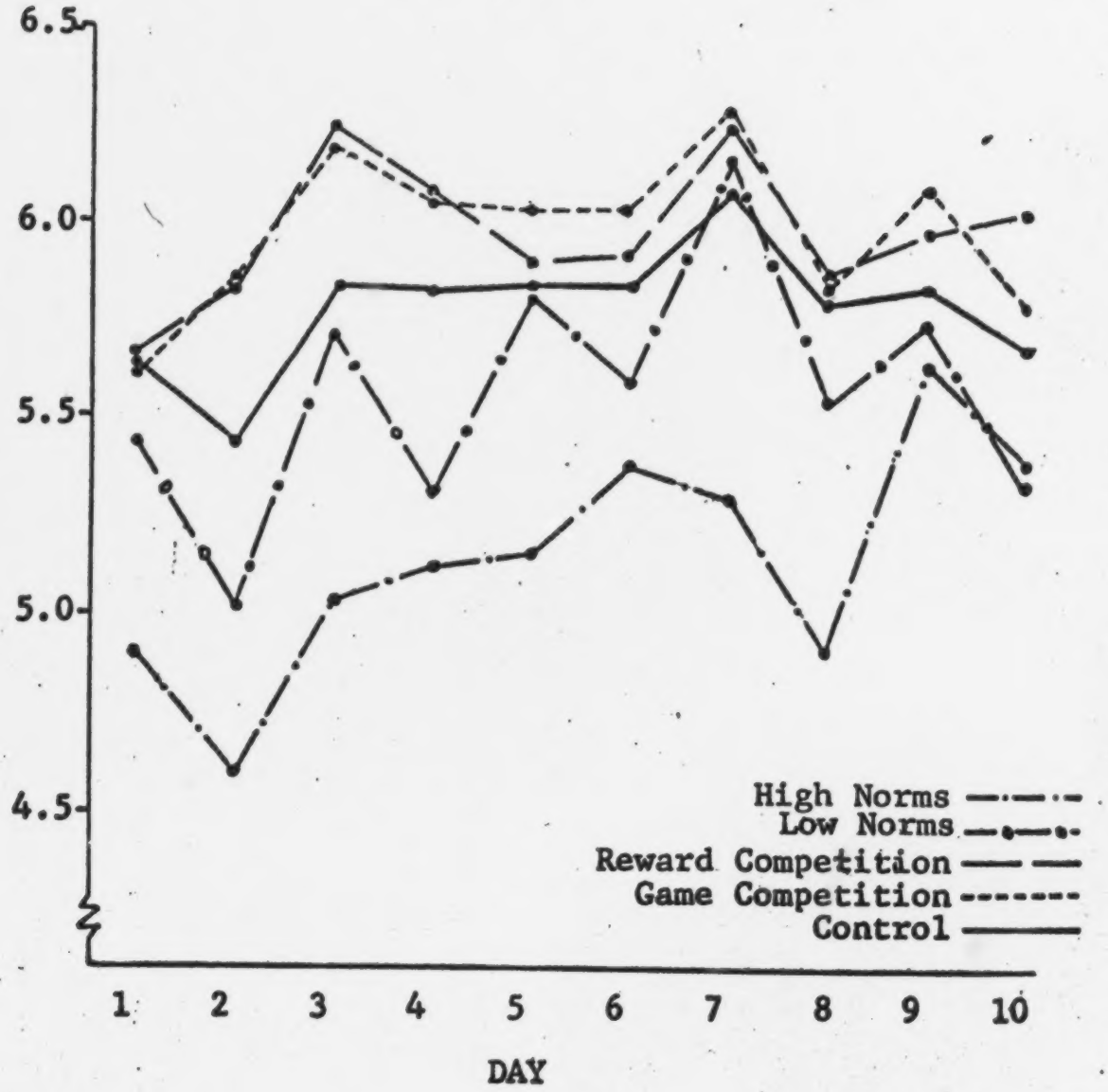
6.5
6.0
5.5
5.0
4.5
MEAN PERFORMANCE
High Norms
Low Norms
Reward Competition
Game Competition
Control
1
2
3
4
5
6
7
8
9
10
DAY

FIG. 1

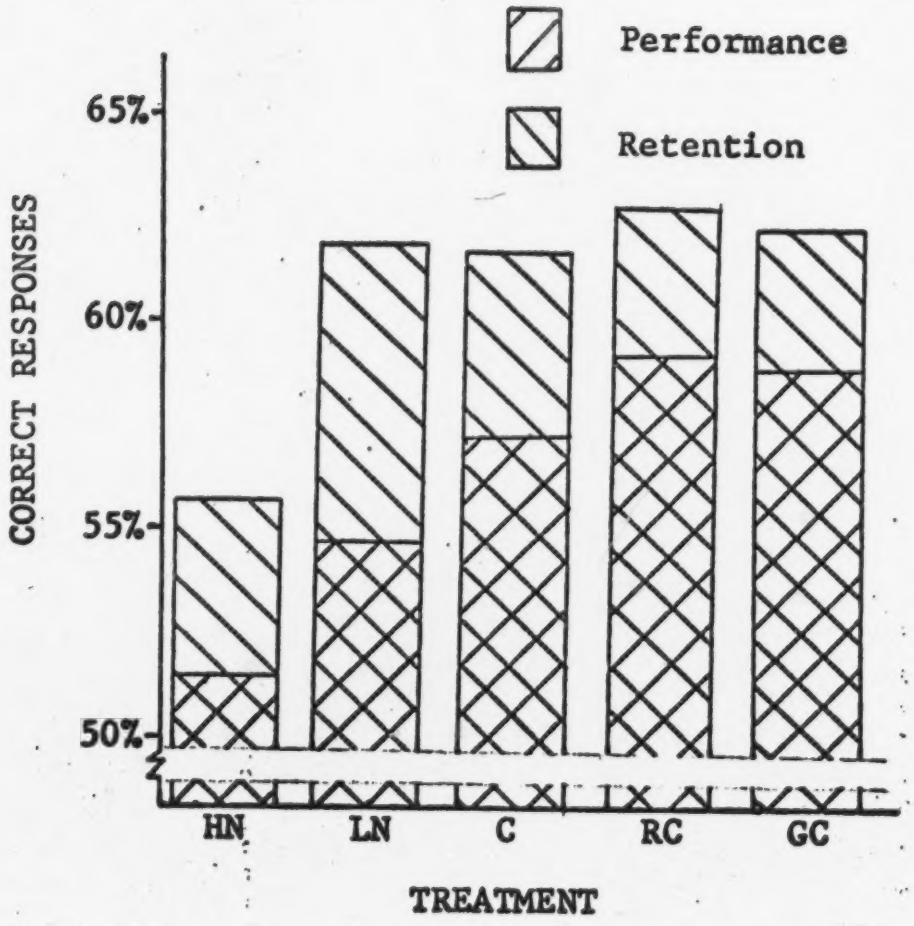
Performance
Retention
65%
60%
55%
50%
CORRECT RESPONSES
HN
LN
C
RC
GC
TREATMENT

FIG. 2

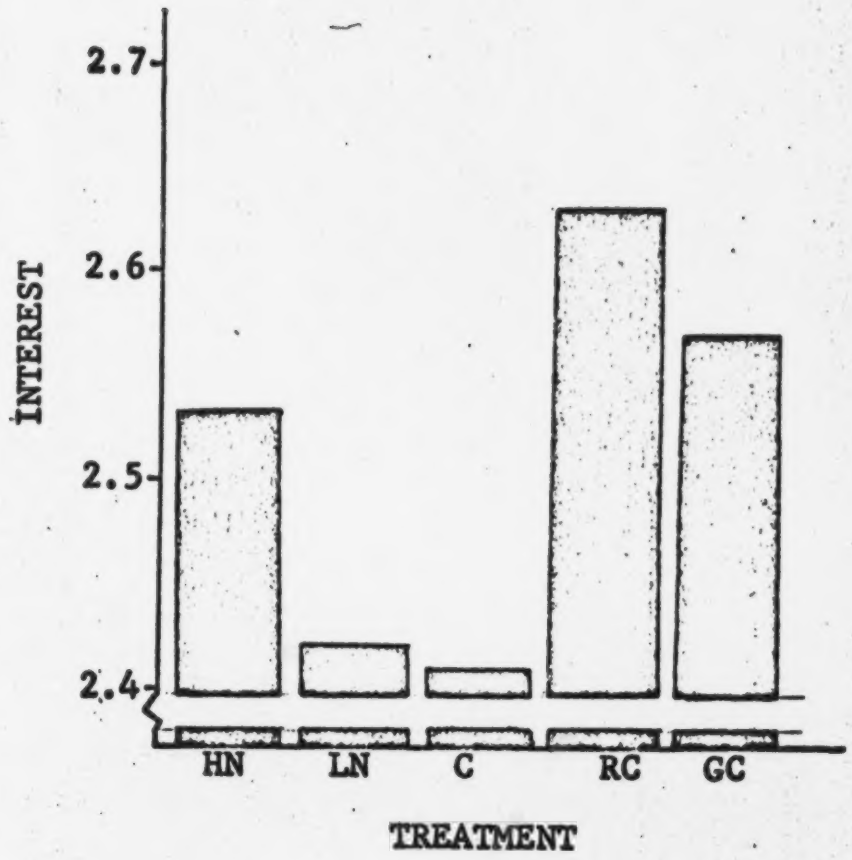

FIG 3

FIGURE CAPTIONS

Figure 1 Mean daily performance for High Norms, Low Norms, and three conditions (i.e., Control, Reward Competition, Game Competition) comprising a related study.

Figure 2 Mean performance and retention for High Norms, Low Norms, and three conditions (i.e., Control, Reward Competition, Game Competition) comprising a related study.

Figure 3 Mean interest for High Norms, Low Norms, and three conditions (i.e., Control, Reward Competition, Game Competition) comprising a related study.